Chapter 19A
Concrete
Comparison Summary

The concrete design chapters, Chapter 19 in the *IBC* and Chapter 41 of *NFPA 5000*, cover the design of plain and reinforced concrete structures, as well as reinforced gypsum concrete.

IBC 2003

Chapter 19 of the *IBC* is 18 pages long, and is based on *ACI 318-02*, the national standard for concrete construction. Sections 1902 through 1907 reproduce chapters from *ACI 318*-02 that are of special use to field enforcement personnel. Section 1908 amends portions of *ACI 318-02* to enhance seismic safety. Section 1910 contains additional seismic provisions, for integrating *ACI 318-02* with provisions of Chapter 16 and, indirectly to *ASCE 7-02*. A very useful section in the *IBC* is the allowable stress design provisions for anchorage to concrete, including a table of allowable bolt values. This permits quick anchorage designs without the need to work through the lengthy computations required by Appendix D of *ACI 318*.

NFPA 5000

NFPA 5000 covers concrete design in the 1½ pages of Chapter 41. Chapter 41 also references *ACI 318-02*. Most of the provisions of Chapter 41 consist of *ACI 318-02* or other referenced publications. There are no specific provisions to coordinate *ASCE 7-02* with *ACI 318-02*.

Summary

IBC Chapter 19 covers concrete design in a more comprehensive and user friendly manner. The portions of *ACI 318-02* most useful to inspectors have been included in the code. An attempt has been made to coordinate and integrate the provisions *ACI 318-02* with a seismic design approach based on *ASCE 7-02.* Inclusion of an ASD method for anchorage to concrete, along with tabulated values for bolts, will greatly simplify typical anchorage computations. Very little information, beyond what is already provided in *ACI 318-02* is contained in *NFPA 5000* Chapter 41.

Chapter 19A - Concrete

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
Division I - GENERAL **1900A General**	**1901 - General**	Similar; general comment – IBC has simpler format (no Divisions, tables integrated with applicable sections)
A.1 Scope	1. Scope	Similar
A.2 General Requirements	2. Plain and Reinforced Concrete	Similar
A.3 Design Methods 1. Strength design (load and resistance factor design 2. Allowable stress design	3. Source and applicability (ACI 318)	Similar
A.4 Additional Design and Construction Requirements 1. Anchorage 2. Shotcrete 3. Reinforced gypsum concrete 4. Minimum slab thickness 5. [Not adopted by OSHPD] Unified design provisions for reinforced and prestressed concrete flexural and compression members 6. [Not adopted by OSHPD] Alternative load-factor combination and strength-reduction	1912 – Anchorage (ASD) 1913 – Anchorage (Strength) 1914 – Shotcrete 1915 – Reinforced Gypsum Concrete 1911 – Slab Provisions (see 1911.1 re: minimum thickness, and new provisions for vapor retarder)	Similar
Division II **1901A - Scope**	1901.2	CBC adopts ACI 318-95 and transcribes into the model code, with changes from 318-95 denoted in italics IBC adopts ACI 318-02 by reference (design provisions are not transcribed, but construction provisions are)
1902A - Definitions	**1902 - Definitions**	2001 CBC includes UBC amendments to ACI definitions (air-dry weight), OSHPD makes a few further amendments (e.g. wall pier)
1903A – Specifications for Tests and Materials	**1903 – Specifications for Tests and Materials**	Similar
A.0 Notation	-	No effect
A.1 Tests of Materials	1. General (tests)	Simiilar
A.2 Cement	2. Cement	Similar
A.3 Aggregates OSHPD has substantial amendments pertaining to aggregates	3. Aggregates	Similar
A.4 Water.	4. Water	Similar
A.5 Steel Reinforcement. OSHPD amendment re: welding bars	5. Steel Reinforcement	Similar, evaluate OSHPD amendment for continuation
A.6 Admixtures.	6. Admixtures	Similar, evaluate OSHPD amendment for continuation

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
OSHPD amendment re: fly ash		
A.7 Storage of Materials.	7. Storage of Materials	Similar
A.8 Concrete Testing.	1905.6.3, 1905.6.4	Similar
A.9 Concrete Mix.	1905.8	Similar
A.10 Welding	1903.5.2	Similar
A.11 Glass Fiber Reinforced Concrete	1903.8 Glass fiber reinforced concrete	Similar
1904A – Durability Requirements	**1904A – Durability Requirements**	Similar
A.0 Notation	-	No effect
A.1 Water-Cementitious Materials Ratio	1. Water-Cementitious Materials Ratio	Similar
A.2 Freezing and Thawing Exposures.	2. Freezing and Thawing Exposures	Similar
A.3 Sulfate Exposure	3. Sulfate Exposure	Similar
A.4 Corrosion Protection of Reinforcement	4. Corrosion Protection of Reinforcement	Similar
1905A - Concrete Quality, Mixing and Placing	**1905A - Concrete Quality, Mixing and Placing**	Similar
A.0 Notations	-	No effect
A.1 General (OSHPD amends to prescribe minimum strength	1. General	Evaluate OSHPD amendments for continuation
A.2 Selection of Concrete Proportions OSHPD amends to prescribe methods A, B, C for mix proportioning	2. Selection of Concrete Properties	Similar Evaluate OSHPD amendments for continuation (mix design A, B, C)
A.3 Proportioning on the Basis of Field Experience (Method B) and Trial Mixtures (Method C)	3. Proportioning on the Basis of Field Experience	Similar
A.4 Proportioning without Field Experience or Trial Mixtures.	4. Proportioning without Field Experience or Trial Mixtures	Similar
A.5 Average Strength Reduction.	5. Average Strength Reduction	Similar
A.6 Evaluation and Acceptance of Concrete (OSHPD amend: sampling) 1. Frequency of testing 2. Laboratory-cured specimens. 2.1 Samples for strength 2.2 Cylinders for strength 3. Field-cured specimens 4. Investigation of low-strength test results	6. Evaluation and Acceptance of Concrete	Similar Evaluate continuation of OSHPD amendments
A.7 Preparation of Equipment and Place of Deposit	7. Preparation of Equipment and Place of Deposit	Similar

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2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
A.8 Mixing	8. Mixing	Similar
A.9 Conveying	9. Conveying	Similar
A.10 Depositing OSHPD amendment: A10.9, A10.10	10. Depositing	Similar Continue OSHPD amendments
A.11 Curing	11. Curing	Similar
A.12 Cold Weather Requirements OSHPD amendment A12.4	12. Cold Weather Requirements	Similar Continue OSHPD amendment
A.13 Hot Weather Requirements	13. Hot Weather Requirements	Similar
1906A - Formwork, Embedded Pipes and Construction Joints	**1906 - Formwork, Embedded Pipes and Construction Joints**	Similar
A.1 Design of Formwork	1. Formwork	Similar
A.2 Removal of Forms, Shores and Reshoring. 1. Removal of forms. OSHPD amends re: 12 hours min. 2. Removal of shores and reshoring	2. Removal of Forms, Shores and Reshoring	Similar Continue OSHPD amendments
A.3 Conduits and Pipes Embedded in Concrete. OSHPD amends - detailing openings	3. Conduits and Pipes Embedded in Concrete	Similar Continue OSHPD amendment
A.4 Construction Joints. OSHPD amends re: detailing and surface preparation	4. Construction Joints	Similar Continue OSHPD amendment
1907A - Details of Reinforcement	**1907 - Details of Reinforcement**	Similar
A.0 Notations	-	No effect
A.1 Standard Hooks	1. Hooks	Similar, except IBC refers to ACI 318-02 Sec. 7.1 and 7.2 for hook dimensions
A.2 Minimum Bend Diameters	2. Minimum Bend Diameters	Similar
A.3 Bending	3. Bending	Similar
A.4 Surface Conditions of Reinforcement	4. Surface Conditions of Reinforcement	Similar
A.5 Placing Reinforcement OSHPD amends re: PT tendons	5. Placing Reinforcement	Similar Continue OSHPD amendment
A.6 Spacing Limits for Reinforcement	6. Spacing Limits for Reinforcement	Similar
A.7 Concrete Protection for Reinforcement 1. Cast-in-place concrete (nonprestressed)	7. Concrete Protection for Reinforcement	Similar, except IBC refers to ACI 318-02 Section 7.7.3 for precast and prestress concrete Evaluate OSHPD amendments for continuation in IBC

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
OSHPD amends re: cover for tilt-up panel reinforcement 2. Precast concrete (manufactured under plant control conditions) 3. Prestressed concrete		
A.8 Special Reinforcement Details for Columns	8. Special Reinforcement Details for Columns	Similar
A.9 Connections	9. Connections	Similar, except IBC refers to ACI 318-02 Sec. 7.10
A.10 Lateral Reinforcement for Compression Members	10. Lateral Reinforcement for Compression Members	Similar
A.11 Lateral Reinforcement for Flexural Members	11. Lateral Reinforcement for Flexural Members	Similar, except IBC refers to ACI 318-02 Sec. 7.11
A.12 Shrinkage and Temperature Reinforcement	12. Shrinkage and Temperature Reinforcement	Similar, except IBC refers to ACI 318-02 Sec. 7.12
A.13 Requirements for Structural Integrity	13. Requirements for Structural Integrity	Similar, except IBC refers to ACI 318-02 Sec. 7.13
-	**1908 – Modifications to ACI 318**	IBC Section is new, and contains amendments to ACI 318, numbered 1908.1.1 through 1908.1.7 (all items pertain to ACI 318 Chapter 21 seismic provisions)
1908A – Analysis and Design	**Chapter 8 (ACI 318-02)** **Analysis and Design – General Considerations**	Design provisions contained (by reference per Section 1901) in Chapter 8 of ACI 318-02
A.0 Notations	8.0 Notations	Similar
A.1 Design Methods	8.1 Design Methods	Similar
A.2 Loading	8.2 Loading	Similar
A.3 Methods of Analysis	8.3 Methods of Analysis	Similar
A.4 Redistribution of Negative Moments in Continuous Nonprestressed Flexural Members	8.4 Redistribution of Negative Moments in Continuous Nonprestressed Flexural Members	Similar
A.5 Modulus of Elasticity	8.5 Modulus of Elasticity	Similar
A.6 Stiffness	8.6 Stiffness	Similar
A.7 Span Length	8.7 Span Length	Similar
A.8 Columns	8.8 Columns	Similar
A.9 Arrangement of Live Load	8.9 Arrangement of Live Load	Similar
A.10 T-beam Construction	8.10 T-beam Constuction	Similar
A.11 Concrete Joist Floor Construction (OSHPD amends)	8.11 Concrete Joist Floor Construction	Similar Continue OSHPD amendment in IBC 1908
A.12 Separate Floor Finish	8.12 Separate Floor Finish	Similar
1909A - Strength and Serviceability Requirements	**Chapter 9 (ACI 318-02)** **Strength and Serviceability Requirements**	Design provisions contained (by reference per Section 1901) in Chapter 9 of ACI 318-02

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2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
A.0 Notations	9.0 Notation	Similar
A.1 General	9.1 General	Similar
A.2 Required Strength	9.2 Required Strength	Similar
A.3 Design Strength	9.3 Design Strength	Similar
A.4 Design Strength for Reinforcement	9.4 Design Strength for Reinforcement	Similar
A.5 Control of Deflections 1. general 2. one-way construction 3. two-way construction (non-prestress) 4. prestressed construction 5. composite construction; shored and unshored	9.5 Control of Deflections	Similar
1910A – Flexure and Axial Loads	**Chapter 10 (ACI 318-02)** **Flexure and Axial Loads**	Design provisions contained (by reference per Section 1901) in Chapter 10 of ACI 318-02
A.0 Notations	10.1 Notation	Similar
A.1 Scope	10.1 Scope	Similar
A.2 Design Assumptions	10.2 Design Assumptions	Similar
A.3 General Principles and Requirements	10.3 General Principals and Requirements	Similar
A.4 Distance between Lateral Supports of Flexural Members	10.4 Distance between Lateral Supports of Flexural Members	Similar
A.5 Minimum Reinforcement of Flexural Members	10.5 Minimum Reinforcement of Flexural Members	Similar
A.6 Distribution of Flexural Reinforcement in Beams and One-way Slabs	10.6 Distribution of Flexural Reinforcement in Beams and One-way Slabs	Similar
A.7 Deep Flexural Members	10.7 Deep Beams	Similar
A.8 Design Dimensions for Compression Members	10.8 Design Dimensions for Compression Members	Similar
A.9 Limits for Reinforcement of Compression Members	10.9 Limits for Reinforcement of Compression Members	Similar
A.10 Slenderness Effects in Compression Members	10.10 Slenderness Effects in Compression Members	Similar
A.11 Magnified Moments General	10.11 Magnified Moments - General	Similar
A.12 Magnified Moments Nonsway Frames	10.12 Magnified Moments Nonsway Frames	Similar
A.13 Magnified Moments Sway Frames	10.13 Magnified Moments Sway Frames	Similar
A.14 Axially Loaded Members Supporting Slab System	10.14 Axially Loaded Members Supporting Slab System	Similar
A.15 Transmission of Column	10.15 Transmission of Column	Similar

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
Loads through Floor System	Loads through Floor System	
A.16 Composite Compression Members	10.16 Composite Compression Members	Similar
A.17 Bearing Strength	10.17 Bearing Strength	Similar
1911A - Shear and Torsion	**Chapter 11 (ACI 318-02)** **Shear and Torsion**	Design provisions contained (by reference per Section 1901) in Chapter 11 of ACI 318-02
A.0 Notations	11.0 Notation	Similar
A.1 Shear Strength	11.1 Shear Strength	Similar
A.2 Lightweight Concrete	11.2 Lightweight Concrete	Similar
A.3 Shear Strength Provided by Concrete for Nonprestressed Members	11.3 Shear Strength Provided by Concrete for Nonprestressed Members	Similar
A.4 Shear Strength Provided by Concrete for Prestressed Members	11.4 Shear Strength Provided by Concrete for Prestressed Members	Similar
A.5 Shear Strength Provided by Shear Reinforcement	11.5 Shear Strength Provided by Shear Reinforcement	Similar
A.6 Design for Torsion	11.6 Design for Torsion	Similar
A.7 Shear-friction	11.7 Shear-friction	Similar
A.8 Special Provisions for Deep Flexural Members	11.8 Deep Beams	Similar
A.9 Special Provisions for Brackets and Corbels	11.9 Special Provisions for Brackets and Corbels	Similar
A.10 Special Provisions for Walls	11.10 Special Provisions for Walls	Similar
A.11 Transfer of Moments to Columns	11.11 Transfer of Moments to Columns	Similar
A.12 Special Provisions for Slabs and Footings	11.12 Special Provisions for Slabs and Footings	Similar
1912A – Development and Splices of Reinforcement	**Chapter 12 (ACI 318-02)** **Development and Splices of Reinforcement**	Design provisions contained (by reference per Section 1901) in Chapter 12 of ACI 318-02
A.0 Notations	12.0 Notation	Similar
A.1 Development of Reinforcement.General	12.1 Development of Reinforcement.General	Similar
A.2 Development of Deformed Bars and Deformed Wire in Tension	12.2 Development of Deformed Bars and Deformed Wire in Tension	Similar
A.3 Development of Deformed Bars in Compression	12.3 Development of Deformed Bars in Compression	Similar
A.4 Development of Bundled Bars	12.4 Development of Bundled Bars	Similar
A.5 Development of Standard Hooks in Tension	12.5 Development of Standard Hooks in Tension	Similar
A.6 Mechanical Anchorage	12.6 Mechanical Anchorage	Similar

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
A.7 Development of Welded Deformed Wire Fabric in Tension	12.7 Development of Welded Deformed Wire Fabric in Tension	Similar
A.8 Development of Welded Plain Wire Fabric in Tension	12.8 Development of Welded Plain Wire Fabric in Tension	Similar
A.9 Development of Prestressing Strand	12.9 Development of Prestressing Strand	Similar
A.10 Development of Flexural Reinforcement.	12.10 Development of Flexural Reinforcement	Similar
A.11 Development of Positive Moment Reinforcement	12.11 Development of Positive Moment Reinforcement	Similar
A.12 Development of Negative Moment Reinforcement.	12.12 Development of Negative Moment Reinforcement	Similar
A.13 Development of Web Reinforcement	12.13 Development of Web Reinforcement	Similar
A.14 Splices of Reinforcement	12.14 Splices of Reinforcement	Similar
A.15 Splices of Deformed Bars and Deformed Wire in Tension	12.15 Splices of Deformed Bars and Deformed Wire in Tension	Similar
A.16 Splices of Deformed Bars in Compression	12.16 Splices of Deformed Bars in Compression	Similar
A.17 Special Splice Requirements for Columns	12.17 Special Splice Requirements for Columns	Similar
A.18 Splices of Welded Deformed Wire Fabric in Tension	12.18 Splices of Welded Deformed Wire Fabric in Tension	Similar
A.19 Splices of Welded Plain Wire Fabric in Tension	12.19 Splices of Welded Plain Wire Fabric in Tension	Similar
1913A - Two-Way Slab Systems	**Chapter 13 (ACI 318-02)** **Two-Way Slab Systems**	Design provisions contained (by reference per Section 1901) in Chapter 13 of ACI 318-02
A.0 Notations	13.0 Notation	Similar
A.1 Scope	13.1 Scope	Similar
A.2 Definitions	13.2 Definitions	Similar
A.3 Slab Reinforcement	13.3 Slab Reinforcement	Similar
A.4 Openings in Slab Systems	13.4 Openings in Slab Systems	Similar
A.5 Design Procedures	13.5 Design Procedures	Similar
A.6 Direct Design Method	13.6 Direct Design Method	Similar
A.7 Equivalent Frame Method	13.7 Equivalent Frame Method	Similar
1914A – Walls	**Chapter 14 (ACI 318-02)** **Walls**	Design provisions contained (by reference per Section 1901) in Chapter 14 of ACI 318-02
A.0 Notations	14.0 Notation	Similar
A.1 Scope	14.1 Scope	Similar
A.2 General (OSHPD amends A.2.6)	14.2 General	Similar; continue OSHPD amendment in IBC 1914
A.3 Minimum Reinforcement	14.3 Minimum Reinforcement	Similar

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
A.4 Walls Designed as Compression Members	14.4 Walls Designed as Compression Members	Similar
-	14.5 Empirical Design Method	Evaluate for Non-adoption by OSHPD
A.6 Nonbearing Walls OSHPD amends	14.6 Nonbearing Walls	Similar; continue OSHPD amendment in IBC 1914
A.7 Walls as Grade Beams	14.7 Walls as Grade Beams	Similar
A.8 Alternate Design Slender Walls UBC amends ACI 318	14.8 Alternative Design of Slender Walls	Similar – evaluate for consistency with CBC provisions, if amendment needed place in IBC 1914
A.9 Wall Piers OSHPD amends	-	Continue OSHPD amendment in IBC 1914
A.10 Foundation Walls OSHPD amends	-	Continue OSHPD amendment (in IBC 1914), check terminology used in amendment for curb, wall, etc.
1915A – Footings	**Chapter 15 (ACI 318-02)** **Footings**	Design provisions contained (by reference per Section 1901) in Chapter 15 of ACI 318-02
A.0 Notations	15.0 Notation	Similar
A.1 Scope	15.1 Scope	Similar
A.2 Loads and Reactions OSHPD amends – A.2.1	15.2 Loads and Reactions	Similar; continue OSHPD amendment in IBC 1915
A.3 Footings Supporting Circular or Regular Polygon shaped Columns or Pedestals	15.3 Footings Supporting Circular or Regular Polygon shaped Columns or Pedestals	Similar
A.4 Moment in Footings	15.4 Moment in Footings	Similar
A.5 Shear in Footings	15.5 Shear in Footings	Similar
A.6 Development of Reinforcement in Footings	15.6 Development of Reinforcement in Footings	Similar
A.7 Minimum Footing Depth	15.7 Minimum Footing Depth	Similar
A.8 Transfer of Force at Base of Column, Wall or Reinforced Pedestal	15.8 Transfer of Force at Base of Column, Wall or Reinforced Pedestal	Similar
A.9 Sloped or Stepped Footings	15.9 Sloped or Stepped Footings	Similar
A.10 Combined Footings and Mats	15.10 Combined Footings and Mats	Similar
A.11 Plain Concrete Pedestals and Footings - OSHPD does not adopt	-	No effect
1916A - Precast Concrete	**Chapter 16 (ACI 318-02)** **Precast Concrete**	Design provisions contained (by reference per Section 1901) in Chapter 16 of ACI 318-02
A.0 Notations	16.0 Notation	Similar
A.1 Scope	16.1 Scope	Similar
A.2 General	16.2 General	Similar
A.3 Distribution of Forces among Members	16.3 Distribution of Forces among Members	Similar Review location of 1916A.3.3 – relocate to 1916A.11and

Chapter 19A - Concrete

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
OSHPD amendment (1916A.3.3)		continue (or locate in IBC 1908)
A.4 Member Design	16.4 Member Design	Similar
A.5 Structural Integrity	16.5 Structural Integrity	Similar
A.6 Connection and Bearing Design	16.6 Connection and Bearing Design	Similar
A.7 Items Embedded after Concrete Placement Minor OSHPD amendments	16.7 Items Embedded after Concrete Placement	Similar Evaluate OSHPD amendments for continuation
A.8 Marking and Identification	16.8 Marking and Identification	Similar
A.9 Handling	16.9 Handling	Similar
A.10 Strength Evaluation of Precast Construction	16.10 Strength Evaluation of Precast Construction	Similar
A.11 Reinforcement (OSHPD amendments)	-	Review 1916A.11 for updating, references, clarity
A.12 On-site Cast Precast Wall Panels (OSHPD amendments)	-	Review 1916A.12 for updating, references, clarity
1917A - Composite Concrete Flexural Members	**Chapter 17 (ACI 318-02)** **Composite Concrete Flexural Members**	Design provisions contained (by reference per Section 1901) in Chapter 17 of ACI 318-02
A.0 Notations	17.0 Notation	Similar
A.1 Scope	17.1 Scope	Similar
A.2 General	17.2 General	Similar
A.3 Shoring	17.3 Shoring	Similar
A.4 Vertical Shear Strength	17.4 Vertical Shear Strength	Similar
A.5 Horizontal Shear Strength	17.5 Horizontal Shear Strength	Similar
A.6 Ties for Horizontal Shear	17.6 Ties for Horizontal Shear	Similar
1918A – Prestressed Concrete	**Chapter 18 (ACI 318-02)** **Prestressed Concrete**	Design provisions contained (by reference per Section 1901) in Chapter 18 of ACI 318-02
A.0 Notations	18.0 Notation	Similar
A.1 Scope	18.1 Scope	Simlar
A.2 General OSHPD amends (1918A.2.3, 2.4, 2.7)	18.2 General	Similar, review OSHPD amendments – refers to PCI Design Handbook, 5th edition.
A.3 Design Assumptions	18.3 Design Assumptions	Similar
A.4 Permissible Stresses in Concrete Flexural Members	18.4 Serviceability Requirements - - Flexural Members	Similar
A.5 Permissible Stress in Prestressing Tendons	18.5 Permissible Stress in Prestressing Tendons	Similar
A.6 Loss of Prestress OSHPD amendment 1918A.6.4	18.6 Loss of Prestress	Similar; review OSHPD amendment 1918A.6.4 for continuation in IBC 1908

Chapter 19A - Concrete

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
A.7 Flexural Strength	18.7 Flexural Strength	Similar
A.8 Limits for Reinforcement of Flexural Members	18.8 Limits for Reinforcement of Flexural Members	Similar
A.9 Minimum Bonded Reinforcement UBC amends ACI 318	18.9 Minimum Bonded Reinforcement	Similar, check UBC amendments and ACI 318-02 provisions
A.10 Statically Indeterminate Structures	18.10 Statically Indeterminate Structures	Similar
A.11 Compression Members. Combined Flexure and Axial Loads	18.11 Compression Members. Combined Flexure and Axial Loads	Similar
A.12 Slab Systems OSHPD amendment 1918A.12.7	18.12 Slab Systems	Review amendment for continuation in IBC 1908
A.13 Tendon Anchorage Zones	18.13 Post-tensioned Tendon Anchorage Zones 18.14 Design of Anchorage Zones for Monostrand or Singel 5/8" Diameter Bar Tendons 18.15 Design of Anchorage Zones for Multistrand Tendons	Similar
A.14 Corrosion Protection for Unbonded Prestressing Tendons	18.16 Corrosion Protection for Unbonded Tendons	Similar
A.15 Posttensioning Ducts	18.17 Posttensioning Ducts	Similar
A.16 Grout for Bonded Prestressing Tendons	18.18 Grout for Bonded Tendons	Similar
A.17 Protection for Prestressing Tendons	18.19 Protection for Prestressing Steel	Similar
A.18 Application and Measurement of Prestress Force.	18.20 Application and Measurement of Prestress Force	Similar
A.19 Posttensioning Anchorages and Couplers OSHPD amendment – 1918A.19.5	18.21 Posttensioning Anchorages and Couplers 18.22 External Posttensioning	Similar, review amendment for continuation in IBC 1908
A.20 Lift Slab Shear OSHPD amendment	-	Review amendment for continuation in IBC 1908
A.21 Prestressed Flat Stab OSHPD amendment	-	Review amendment for continuation in IBC 1908
1919A - Shells and Folded Plates	**Chapter 19 (ACI 318-02)** **Shells and Folded Plate Members**	Design provisions contained (by reference per Section 1901) in Chapter 19 of ACI 318-02
A.0 Notations	19.0 Notation	Similar
A.1 Scope and Definitions	19.1 Scope and Definitions	Similar
A.2 Analysis and Design	19.2 Analysis and Design	Similar
A.3 Design Strength of Materials	19.3 Design Strength of Materials	Similar

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2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
A.4 Shell Reinforcement	19.4 Shell Reinforcement	Similar
A.5 Construction	19.5 Construction	Similar
1920A – Strength Evaluation of Existing Structures	**Chapter 20 (ACI 318-02)** **Strength Evaluation of Existing Structures**	Design provisions contained (by reference per Section 1901) in Chapter 20 of ACI 318-02
A.0 Notations	20.0 Notation	Similar
A.1 Strength Evaluation General	20.1 Strength Evaluation General	Similar
A.2 Determination of Required Dimensions and Material Properties	20.2 Determination of Required Dimensions and Material Properties	Similar
A.3 Load Test Procedure	20.3 Load Test Procedure	Similar
A.4 Loading Criteria	20.4 Loading Criteria	Similar
A.5 Acceptance Criteria	20.5 Acceptance Criteria	Similar
A.6 Provisions for Lower Load Rating	20.6 Provisions for Lower Load Rating	Similar
A.7 Safety	20.7 Safety	Similar
1921A - Reinforced Concrete Structures Resisting Forces Induced by Earthquake Motions Note: model code amends ACI 318 provisions, OSHPD makes some minor amendments	**Chapter 21 (ACI 318-02) - Special Provisions for Seismic Design** **IBC Section 1910 Seismic Design Provisions** **IBC Section 1908 amends ACI 318, Ch. 21**	Design provisions contained (by reference per Section 1901) in Chapter 21 of ACI 318-02 User must consider all three sets of provisions (ACI Ch 21, IBC 1908 amendments to ACI, and IBC 1910, appears to be a somewhat complicated format Evaluate IBC provisions, ACI 318 Ch 21, and ASCE 7-02 for conflicts
A.0 Notations	21.0 Notation	Similar
A.1 Definitions	21.1 Definitions	Similar
A.2 General Requirements	21.2 General Requirements	Similar
A.3 Flexural Members of Frames.	21.3 Flexural Members of Special Moment Frames	Similar
A.4 Frame Members Subjected to Bending and Axial Load	21.4 Special Moment Frame Members Subjected to Bending and Axial Load	Similar
A.5 Joints of Frames	21.5 Joints of Special Moment Frames	Similar
-	21.6 Special Moment Frames Constructed Using Precast Concrete	Evaluate for adoption
A.6 Shear Walls, Diaphragms and Trusses	21.7 Special Reinforced Concrete Structural Walls & Coupling Beams 21.9 Special Diaphragms and Trusses	Similar
-	21.8 Special Structural Walls Constructed Using Precast Concrete	Evaluate for adoption
A.7 Frame Members Not Part of	21.11 Frame Members not	Similar

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
the Lateral-force-resisting System	Proportioned to Resist Forces Induced by Earthquake Motions	
-	21.10 Foundations	Check IBC Ch 18 provisions for any potential conflicts
-	21.12 Requirements for Intermediate Moment Frames	Evaluate for non-adoption
-	21.13 Intermediate Precast Structural Walls	Evaluate for non-adoption
1922A - Plain Concrete A.1 OSHPD amendment prohibiting plain concrete for use other than fill	**1909 Structural Plain Concrete** **Chapter 22 (ACI 318-02) – Structural Plain Concrete**	Evaluate IBC Sec. 1909 and ACI 318-02 Ch 22 provisions for non-adoption
Division III – Design Standard for Anchorage to Concrete **1923A - Anchorage to Concrete**	**1912 Anchorage to Concrete – Allowable Stress Design** **1913 Anchorage to Concrete – Strength Design**	Similar, 1913 refers to ACI 318-02 Appendix D provisions
A.1 Service Load Design	1912.1, 1912.2, 1912.3, 1912.4	Similar
A.2 Strength Design A.3 Strength of Anchors 1923A.3.1.1 [For OSHPD/SS] A.3.2 Design strength in tension A.3.3 Design strength in shear A.3.4 Combined tension and shear A.3.5 Drilled-in expansion bolts or chemical-type anchors in concrete. (OSHPD amendment)	1913.1 (refers to ACI 318 App D)	Similar, 318 Appendix D more comprehensive Evaluate OSHPD amendment for continuation
Division IV – Design and Construction Standard for Shotcrete **1924A – Shotcrete**	**1914 – Shotcrete**	Similar
A.1 General - OSHPD amends	1. General	Similar, continue OSHPD amendment
A.2 Proportions and Materials	2. Proportions and Materials	Similar
A.3 Aggregate	3. Aggregate	Similar
A.4 Reinforcement	4. Reinforcement	Similar
A.5 Preconstruction Tests	5. Preconstruction Tests	Similar
A.6 Rebound.	6. Rebound	Similar
A.7 Joints – OSHPD amends	7. Joints	Similar, continue OSHPD amendment
A.8 Damage	8. Damage	Similar
A.9 Curing	9. Curing	Similar
A.10 Strength Test - OSHPD amends	10. Strength Tests	Similar, continue OSHPD amendment
A.11 Inspections - OSHPD	-	Evaluate for continuation of CBC provisions as OSHPD

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
amends.		amendment
A.12 Equipment	-	Evaluate for continuation of CBC provisions as OSHPD amendment
A.13 Forms and Ground Wires for Shotcrete – OSHPD amends	-	Evaluate for continuation of CBC provisions as OSHPD amendment
A.14 Placing - OSHPD amends, refers to ACI 506 standard	-	Evaluate for continuation of CBC provisions as OSHPD amendment
Division V – Design Standard for Reinforced Gypsum Concrete **1925A – Reinforced Gypsum Concrete**	**1915 – Reinforced Gypsum Concrete**	IBC provisions primarily based on reference standards ASTM C 317 and C 956
A.1 General	ASTM C 317, C 956	Review referenced standard
A.2 Design	ASTM C 317, C 956	Review referenced standard
A.3 Stresses	ASTM C 317, C 956	Review referenced standard
A.4 Diaphragms OSHPD amends	ASTM C 317, C 856 1915.2 Minimum Thickness	Evaluate referenced standards and IBC provisions to determine location for OSHPD amendments
A.5 Details of Construction OSHPD amends	ASTM C 317, C 956	Evaluate referenced standards and IBC provision to determine location for OSHPD amendment
-	**1916 – Concrete-filled Pipe Columns**	Evaluate for adoption (or non-adoption)
Division VI – Alternate Design Method **1926A – Alternate Design Method** (WSD or ASD)	-	IBC does not contain Working Stress Design (WSD) or Allowable Stress Design (ASD) provisions, and ACI 318-02 Commentary Section R1.1 refers user to ACI 318-99 Appendix A. Evaluate need to adopt of Appendix A, ACI 318-99; if not adopted, allowance by OSHPD of ASD provisions will be discretionary
Division VII - Unified Design Provisions **1927A - Unified Design Provisions for Reinforced and Prestressed Concrete Flexural and Compression Members** see footnotes are bottom of page 2-184.83 (CBC, 2001 ed.)	**Appendix B (ACI 318-02)** **Alternate Provisions for Reinforced and Prestressed Concrete Flexural and Compression Members**	Similar, provisions contained in referenced standard (ACI 318-02)
Division VIII - Alternative Load-Factor Combination and Strength Reduction Factors **1928A – Alternative Load-Factor Combination and Strength Reduction Factors**	**Appendix C (ACI 318-02)** **Alternate Load and Strength Reduction Factors**	Similar, provisions contained in referenced standard (ACI 318-02)
1929A – Testing and Inspection Entire section is OSHPD amendment	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17

Chapter 19A - Concrete

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
A.1 Cementitious Material Test	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.2 Tests of Reinforcing Bars	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.3 Tests for Prestressing Steel and Anchorage	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.4 Batch Plant Inspection	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.5 Waiver of Batch Plant Inspection	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.6 Waiver of Material Testing	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.7 Placing Record	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.8 Composite Construction Cores	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.9 Inspection of Prestressed Concrete	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.10 Inspection of Pneumatically Placed Concrete Work (Shotcrete)	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.11 Tests of Shotcrete.	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.12 Inspection of Welded Reinforcing Bars	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.13 Gypsum Field Tests	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
1930A – Existing Concrete Structures (OSHPD amendment)	-	Evaluate and continue OSHPD amendment, may be located in either Chapter 17 or 19
Table 19A-A-1 Total Air Content for Frost-Resistant Concrete	**Table 1904.2.1** Total Air Content for Frost-Resistant Concrete	Similar
Table 19A-A-2 Requirements for Special Exposure Conditions	**Table 1904.2.2(1)** Requirements for Special Exposure Conditions	Similar
-	**Figure 1904.2.2** Weathering Probability Map for Concrete	Evaluate
Table 19A-A-3 Requirements for Concrete Exposed to De-icing Chemicals	**Table 1904.2.3** Requirements for Concrete Exposed to De-icing Chemicals	Similar
Table 19A-A-4 Requirements for Concrete Exposed to Sulfate-Containing Solutions	**Table 1904.3** Requirements for Concrete Exposed to Sulfate-Containing Solutions	Similar

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
Table 19A-A-5 Maximum Chloride Ion Content for Corrosion Protection Reinforcement	**Table 1904.4.1** Maximum Chloride Ion Content for Corrosion Protection Reinforcement	Similar
Table 19A-A-6 Modification Factor for Standard Deviation When Less than 30 Tests are Available	**Table 5.3.1.2 (ACI 318-02)** Modification Factor for Standard Deviation When Less than 30 Tests are Available	Similar, table contained in ACI 318-02
Table 19A-A-7 Required Average Compressive Strength When Data are not Available to Establish a Standard Deviation	**Table 5.3.2.2 (ACI 318-02)** Required Average Compressive Strength When Data are not Available to Establish a Standard Deviation	Similar, table contained in ACI 318-02
Table 19A-A-8 (OSHPD amendment) Concrete Mixes by Limiting Proportions	-	Evaluate for continuation (prescriptive method A mix), seems useful for small projects
Table 19A-B Minimum Diameters of Bend	**Table 7.2 (ACI 318-02)** Minimum Diameters of Bend	Similar, table contained in ACI 318-02
Table 19A-C-1 Minimum Thickness of Nonprestressed Beams or One-Way Slabs Unless Deflections are Computed	**Table 9.5 (a) (ACI 318-02)** Minimum Thickness of Nonprestressed Beams or One-Way Slabs Unless Deflections are Computed	Similar, table contained in ACI 318-02
Table 19A-C-2 Maximum Permissible Computed Deflections	**Table 9.5 (b) (ACI 318-02)** Maximum Permissible Computed Deflections	Similar, table contained in ACI 318-02
Table 19A-C-3 Minimum Thickness of Slabs Without Interior Beams	**Table 9.5 (c) (ACI 318-02)** Minimum Thickness of Slabs Without Interior Beams	Similar, table contained in ACI 318-02
Table 19A-D Allowable Service Load on Embedded Bolts (OSHPD amends)	**Table 1912.2 (IBC)**	Similar, continue OSHPD amendments to CBC table
Table 19A-E Minimum Compressive Strength and Modulus of Elasticity and of Rigidity of Reinforced Gypsum Concrete	-	Review ASTM C 317, C 956 for equivalent provisions
Table 19A-F Allowable Unit Working Stress Reinforced Gypsum Concrete	-	Review ASTM C 317, C 956 for equivalent provisions
Table 19A-G Shear on Anchor Bolts and Dowels - Reinforced Gypsum Concrete	-	Review ASTM C 317, C 956 for equivalent provisions

2001 CBC – Chapter 19A	IBC – Chapter 19	Comments
Figure 19A-1 Minimum Extensions for Reinforcement in Slabs Without Beams	**Figure 13.3.8 (ACI 318-02)** Minimum Extensions for Reinforcement in Slabs Without Beams	Similar, Figure contained in ACI 318-02

Chapter 19A - Concrete

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
Division I - GENERAL **1900A General**	**41.1 Scope**	Similar
A.1 Scope	41.1 Scope	Similar
A.2 General Requirements	41.2 General	Similar
A.3 Design Methods 1. Strength design (load and resistance factor design 2. Allowable stress design	41.2 General	NFPA 5000 refers to ACI 318 (2002 edition per Chapter 2) for construction and design provisions
A.4 Additional Design and Construction Requirements 1. Anchorage 2. Shotcrete 3. Reinforced gypsum concrete 4. Minimum slab thickness 5. [Not adopted by OSHPD] Unified design provisions for reinforced and prestressed concrete flexural and compression members 6. [Not adopted by OSHPD] Alternative load-factor combination and strength-reduction	41.1.2 - CIP reinforced gypsum concrete 41.7 – Shotcrete 41.6 Slabs-on-Ground 41.6.3 Vapor Retarder (new)	No effect
Division II **1901A - Scope**	**41.1 Scope**	CBC adopts ACI 318-95 and transcribes into the model code, with changes from 318-95 denoted in italics NFPA 5000 adopts ACI 318-02 by reference, with no transcription of any provisions in to the body of NFPA 5000
1902A - Definitions	**Chapter 2 (ACI 318-02)** **Definitions**	Provisions contained in referenced standard
1903A – Specifications for Tests and Materials	**Chapter 3 (ACI 318-02)** **Standards for Tests and Materials**	Provisions contained in referenced standard
A.0 Notation	3.0 Notation	Similar
A.1 Tests of Materials	3.1 Tests of Materials	Similar
A.2 Cement	3.2 Cements	Similar
A.3 Aggregates OSHPD has substantial amendments pertaining to aggregates	3.3 Aggregates	Similar
A.4 Water.	3.4 Water	Similar
A.5 Steel Reinforcement. OSHPD amendment re: welding bars	3.5 Steel Reinforcement	Similar, evaluate OSHPD amendment for continuation

Chapter 19A - Concrete

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
A.6 Admixtures OSHPD amendment re: fly ash	3.6 Admixtures	Similar, evaluate OSHPD amendments for continuation
A.7 Storage of Materials.	3.7 Storage of Materials	Similar
A.8 Concrete Testing.	5.6 (ACI 318), NFPA 5000 Sec. 41.4	Similar
A.9 Concrete Mix.	5.8 (ACI 318)	Similar
A.10 Welding	3.5.2	Similar
A.11 Glass Fiber Reinforced Concrete	-	OSHPD may need to adopt (by amendment) the PCI *MNL 128 Standard*
1904A – Durability Requirements	**Chapter 4 (ACI 318-02)** **Durability Requirements**	Provisions contained in referenced standard
A.0 Notation	4.0 Notation	Similar
A.1 Water-Cementitious Materials Ratio	4.1 Water-Cementitious Materials Ratio	Similar
A.2 Freezing and Thawing Exposures.	4.2 Freezing and Thawing Exposures	Similar
A.3 Sulfate Exposure	4.3 Sulfate Exposure	Similar
A.4 Corrosion Protection of Reinforcement	4.4 Corrosion Protection of Reinforcement	Similar
1905A - Concrete Quality, Mixing and Placing	**Chapter 5 (ACI 318-02)** **Concrete Quality, Mixing and Placing**	Provisions contained in referenced standard
A.0 Notations	5.0 Notation	Similar
A.1 General (OSHPD amends to prescribe minimum strength	5.1 General	Similar, OSHPD amendment to be continued in NFPA 5000
A.2 Selection of Concrete Proportions OSHPD amends to prescribe methods A, B, C for mix proportioning	5.2 Selection of Concrete Properties	Similar Evaluate OSHPD amendments for continuation (mix design A, B, C) in NFPA 5000
A.3 Proportioning on the Basis of Field Experience (Method B) and Trial Mixtures (Method C)	5.3 Proportioning on the Basis of Field Experience or Trial Mixtures, or Both	Similar
A.4 Proportioning without Field Experience or Trial Mixtures.	5.4 Proportioning without Field Experience or Trial Mixtures	Similar
A.5 Average Strength Reduction.	5.5 Average Strength Reduction	Similar
A.6 Evaluation and Acceptance of Concrete (OSHPD amend: sampling) 1. Frequency of testing 2. Laboratory-cured specimens. 2.1 Samples for strength 2.2 Cylinders for strength 3. Field-cured specimens 4. Investigation of low-strength	5.6 Evaluation and Acceptance of Concrete	Similar Evaluate continuation of OSHPD amendments in NFPA 5000

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
test results		
A.7 Preparation of Equipment and Place of Deposit	5.7 Preparation of Equipment and Place of Deposit	Similar
A.8 Mixing	5.8 Mixing	Similar
A.9 Conveying	5.9 Conveying	Similar
A.10 Depositing OSHPD amendment: A10.9, A10.10	5.10 Depositing	Similar Continue OSHPD amendments in NFPA 5000
A.11 Curing	5.11 Curing	Similar
A.12 Cold Weather Requirements OSHPD amendment A12.4	5.12 Cold Weather Requirements	Similar Continue OSHPD amendment in NFPA 5000
A.13 Hot Weather Requirements	5.13 Hot Weather Requirements	Similar
1906A - Formwork, Embedded Pipes and Construction Joints	**Chapter 6 (ACI 318-02)** **Formwork, Embedded Pipes and Construction Joints**	Provisions contained in referenced standard
A.1 Design of Formwork	6.1 Design of Formwork	Similar
A.2 Removal of Forms, Shores and Reshoring. 1. Removal of forms. OSHPD amends re: 12 hours min. 2. Removal of shores and reshoring	6.2 Removal of Forms, Shores and Reshoring	Similar Continue OSHPD amendments in NFPA 5000
A.3 Conduits and Pipes Embedded in Concrete. OSHPD amends - detailing openings	6.3 Conduits and Pipes Embedded in Concrete	Similar Continue OSHPD amendment in NFPA 5000
A.4 Construction Joints. OSHPD amends re: detailing and surface preparation	6.4. Construction Joints	Similar Continue OSHPD amendment in NFPA 5000
1907A - Details of Reinforcement	**Chapter 7 (ACI 318-02)** **Details of Reinforcement**	Provisions contained in referenced standard
A.0 Notations	7.0 Notation	Similar
A.1 Standard Hooks	7.1 Standard Hooks	Similar
A.2 Minimum Bend Diameters	7.2 Minimum Bend Diameters	Similar
A.3 Bending	7.3 Bending	Similar
A.4 Surface Conditions of Reinforcement	7.4 Surface Conditions of Reinforcement	Similar
A.5 Placing Reinforcement OSHPD amends re: PT tendons	7.5 Placing Reinforcement	Similar Continue OSHPD amendment in NFPA 5000
A.6 Spacing Limits for Reinforcement	7.6 Spacing Limits for Reinforcement	Similar

Chapter 19A - Concrete

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
A.7 Concrete Protection for Reinforcement 1. Cast-in-place concrete (nonprestressed) OSHPD amends re: cover for tilt-up panel reinforcement 2. Precast concrete (manufactured under plant control conditions) 3. Prestressed concrete	7.7 Concrete Protection for Reinforcement	Similar Evaluate OSHPD amendments for continuation in NFPA 5000
A.8 Special Reinforcement Details for Columns	7.8 Special Reinforcement Details for Columns	Similar
A.9 Connections	7.9 Connections	Similar
A.10 Lateral Reinforcement for Compression Members	7.10 Lateral Reinforcement for Compression Members	Similar
A.11 Lateral Reinforcement for Flexural Members	7.11 Lateral Reinforcement for Flexural Members	Similar
A.12 Shrinkage and Temperature Reinforcement	7.12 Shrinkage and Temperature Reinforcement	Similar
A.13 Requirements for Structural Integrity	7.13 Requirements for Structural Integrity	Similar
1908A – Analysis and Design	**Chapter 8 (ACI 318-02)** **Analysis and Design – General Considerations**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 8 of ACI 318-02
A.0 Notations	8.0 Notations	Similar
A.1 Design Methods	8.1 Design Methods	Similar
A.2 Loading	8.2 Loading	Similar
A.3 Methods of Analysis	8.3 Methods of Analysis	Similar
A.4 Redistribution of Negative Moments in Continuous Nonprestressed Flexural Members	8.4 Redistribution of Negative Moments in Continuous Nonprestressed Flexural Members	Similar
A.5 Modulus of Elasticity	8.5 Modulus of Elasticity	Similar
A.6 Stiffness	8.6 Stiffness	Similar
A.7 Span Length	8.7 Span Length	Similar
A.8 Columns	8.8 Columns	Similar
A.9 Arrangement of Live Load	8.9 Arrangement of Live Load	Similar
A.10 T-beam Construction	8.10 T-beam Constuction	Similar
A.11 Concrete Joist Floor Construction (OSHPD amends – A11.5, A11.6, A11.9)	8.11 Concrete Joist Floor Construction	Similar Continue OSHPD amendment (amend the referenced standard ACI 318-02 in NFPA 5000)
A.12 Separate Floor Finish	8.12 Separate Floor Finish	Similar
1909A - Strength and Serviceability Requirements	**Chapter 9 (ACI 318-02)**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 9 of ACI 318-02

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
	Strength and Serviceability Requirements	
A.0 Notations	9.0 Notation	Similar
A.1 General	9.1 General	Similar
A.2 Required Strength	9.2 Required Strength	Similar
A.3 Design Strength	9.3 Design Strength	Similar
A.4 Design Strength for Reinforcement	9.4 Design Strength for Reinforcement	Similar
A.5 Control of Deflections 1. general 2. one-way construction 3. two-way construction (non-prestress) 4. prestressed construction 5. composite construction; shored and unshored	9.5 Control of Deflections	Similar
1910A – Flexure and Axial Loads	**Chapter 10 (ACI 318-02)** **Flexure and Axial Loads**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 10 of ACI 318-02
A.0 Notations	10.1 Notation	Similar
A.1 Scope	10.1 Scope	Similar
A.2 Design Assumptions	10.2 Design Assumptions	Similar
A.3 General Principles and Requirements	10.3 General Principals and Requirements	Similar
A.4 Distance between Lateral Supports of Flexural Members	10.4 Distance between Lateral Supports of Flexural Members	Similar
A.5 Minimum Reinforcement of Flexural Members	10.5 Minimum Reinforcement of Flexural Members	Similar
A.6 Distribution of Flexural Reinforcement in Beams and One-way Slabs	10.6 Distribution of Flexural Reinforcement in Beams and One-way Slabs	Similar
A.7 Deep Flexural Members	10.7 Deep Beams	Similar
A.8 Design Dimensions for Compression Members	10.8 Design Dimensions for Compression Members	Similar
A.9 Limits for Reinforcement of Compression Members	10.9 Limits for Reinforcement of Compression Members	Similar
A.10 Slenderness Effects in Compression Members	10.10 Slenderness Effects in Compression Members	Similar
A.11 Magnified Moments General	10.11 Magnified Moments - General	Similar
A.12 Magnified Moments Nonsway Frames	10.12 Magnified Moments Nonsway Frames	Similar
A.13 Magnified Moments Sway Frames	10.13 Magnified Moments Sway Frames	Similar
A.14 Axially Loaded Members	10.14 Axially Loaded Members	Similar

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
Supporting Slab System	Supporting Slab System	
A.15 Transmission of Column Loads through Floor System	10.15 Transmission of Column Loads through Floor System	Similar
A.16 Composite Compression Members	10.16 Composite Compression Members	Similar
A.17 Bearing Strength	10.17 Bearing Strength	Similar
1911A - Shear and Torsion	**Chapter 11 (ACI 318-02)** **Shear and Torsion**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 11 of ACI 318-02
A.0 Notations	11.0 Notation	Similar
A.1 Shear Strength	11.1 Shear Strength	Similar
A.2 Lightweight Concrete	11.2 Lightweight Concrete	Similar
A.3 Shear Strength Provided by Concrete for Nonprestressed Members	11.3 Shear Strength Provided by Concrete for Nonprestressed Members	Similar
A.4 Shear Strength Provided by Concrete for Prestressed Members	11.4 Shear Strength Provided by Concrete for Prestressed Members	Similar
A.5 Shear Strength Provided by Shear Reinforcement	11.5 Shear Strength Provided by Shear Reinforcement	Similar
A.6 Design for Torsion	11.6 Design for Torsion	Similar
A.7 Shear-friction	11.7 Shear-friction	Similar
A.8 Special Provisions for Deep Flexural Members	11.8 Deep Beams	Similar
A.9 Special Provisions for Brackets and Corbels	11.9 Special Provisions for Brackets and Corbels	Similar
A.10 Special Provisions for Walls	11.10 Special Provisions for Walls	Similar
A.11 Transfer of Moments to Columns	11.11 Transfer of Moments to Columns	Similar
A.12 Special Provisions for Slabs and Footings	11.12 Special Provisions for Slabs and Footings	Similar
1912A – Development and Splices of Reinforcement	**Chapter 12 (ACI 318-02)** **Development and Splices of Reinforcement**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 12 of ACI 318-02
A.0 Notations	12.0 Notation	Similar
A.1 Development of Reinforcement.General	12.1 Development of Reinforcement.General	Similar
A.2 Development of Deformed Bars and Deformed Wire in Tension	12.2 Development of Deformed Bars and Deformed Wire in Tension	Similar
A.3 Development of Deformed Bars in Compression	12.3 Development of Deformed Bars in Compression	Similar
A.4 Development of Bundled Bars	12.4 Development of Bundled Bars	Similar
A.5 Development of Standard	12.5 Development of Standard	Similar

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
Hooks in Tension	Hooks in Tension	
A.6 Mechanical Anchorage	12.6 Mechanical Anchorage	Similar
A.7 Development of Welded Deformed Wire Fabric in Tension	12.7 Development of Welded Deformed Wire Fabric in Tension	Similar
A.8 Development of Welded Plain Wire Fabric in Tension	12.8 Development of Welded Plain Wire Fabric in Tension	Similar
A.9 Development of Prestressing Strand	12.9 Development of Prestressing Strand	Similar
A.10 Development of Flexural Reinforcement.	12.10 Development of Flexural Reinforcement	Similar
A.11 Development of Positive Moment Reinforcement	12.11 Development of Positive Moment Reinforcement	Similar
A.12 Development of Negative Moment Reinforcement.	12.12 Development of Negative Moment Reinforcement	Similar
A.13 Development of Web Reinforcement	12.13 Development of Web Reinforcement	Similar
A.14 Splices of Reinforcement	12.14 Splices of Reinforcement	Similar
A.15 Splices of Deformed Bars and Deformed Wire in Tension	12.15 Splices of Deformed Bars and Deformed Wire in Tension	Similar
A.16 Splices of Deformed Bars in Compression	12.16 Splices of Deformed Bars in Compression	Similar
A.17 Special Splice Requirements for Columns	12.17 Special Splice Requirements for Columns	Similar
A.18 Splices of Welded Deformed Wire Fabric in Tension	12.18 Splices of Welded Deformed Wire Fabric in Tension	Similar
A.19 Splices of Welded Plain Wire Fabric in Tension	12.19 Splices of Welded Plain Wire Fabric in Tension	Similar
1913A - Two-Way Slab Systems	**Chapter 13 (ACI 318-02)** **Two-Way Slab Systems**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 13 of ACI 318-02
A.0 Notations	13.0 Notation	Similar
A.1 Scope	13.1 Scope	Similar
A.2 Definitions	13.2 Definitions	Similar
A.3 Slab Reinforcement	13.3 Slab Reinforcement	Similar
A.4 Openings in Slab Systems	13.4 Openings in Slab Systems	Similar
A.5 Design Procedures	13.5 Design Procedures	Similar
A.6 Direct Design Method	13.6 Direct Design Method	Similar
A.7 Equivalent Frame Method	13.7 Equivalent Frame Method	Similar
1914A – Walls	**Chapter 14 (ACI 318-02)** **Walls**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 14 of ACI 318-02
A.0 Notations	14.0 Notation	Similar
A.1 Scope	14.1 Scope	Similar
A.2 General (OSHPD amends	14.2 General	Similar; continue OSHPD amendment in NFPA 5000

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
A.2.6)		
A.3 Minimum Reinforcement	14.3 Minimum Reinforcement	Similar
A.4 Walls Designed as Compression Members	14.4 Walls Designed as Compression Members	Similar
-	14.5 Empirical Design Method	Evaluate for Non-adoption by OSHPD
A.6 Nonbearing Walls OSHPD amends	14.6 Nonbearing Walls	Similar; continue OSHPD amendment in NFPA 5000
A.7 Walls as Grade Beams	14.7 Walls as Grade Beams	Similar
A.8 Alternate Design Slender Walls UBC amends ACI 318	14.8 Alternative Design of Slender Walls	Similar – evaluate for consistency with CBC provisions, if amendment needed place in NFPA 5000
A.9 Wall Piers OSHPD amends	-	Continue OSHPD amendment in NFPA 5000
A.10 Foundation Walls OSHPD amends	-	Continue OSHPD amendment (in NFPA 5000), check terminology used in amendment for curb, wall, etc.
1915A – Footings	**Chapter 15 (ACI 318-02)** **Footings**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 15 of ACI 318-02
A.0 Notations	15.0 Notation	Similar
A.1 Scope	15.1 Scope	Similar
A.2 Loads and Reactions OSHPD amends	15.2 Loads and Reactions	Similar; continue OSHPD amendment in NFPA 5000
A.3 Footings Supporting Circular or Regular Polygon shaped Columns or Pedestals	15.3 Footings Supporting Circular or Regular Polygon shaped Columns or Pedestals	Similar
A.4 Moment in Footings	15.4 Moment in Footings	Similar
A.5 Shear in Footings	15.5 Shear in Footings	Similar
A.6 Development of Reinforcement in Footings	15.6 Development of Reinforcement in Footings	Similar
A.7 Minimum Footing Depth	15.7 Minimum Footing Depth	Similar
A.8 Transfer of Force at Base of Column, Wall or Reinforced Pedestal	15.8 Transfer of Force at Base of Column, Wall or Reinforced Pedestal	Similar
A.9 Sloped or Stepped Footings	15.9 Sloped or Stepped Footings	Similar
A.10 Combined Footings and Mats	15.10 Combined Footings and Mats	Similar
A.11 Plain Concrete Pedestals and Footings - OSHPD does not adopt	-	No effect
1916A - Precast Concrete	**Chapter 16 (ACI 318-02)** **Precast Concrete**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 16 of ACI 318-02
A.0 Notations	16.0 Notation	Similar
A.1 Scope	16.1 Scope	Similar
A.2 General	16.2 General	Similar

Chapter 19A - Concrete

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
A.3 Distribution of Forces among Members OSHPD amendment (1916A.3.3)	16.3 Distribution of Forces among Members	Similar Review location of 1916A.3.3 – relocate to 1916A.11and continue (locate in NFPA 5000)
A.4 Member Design	16.4 Member Design	Similar
A.5 Structural Integrity	16.5 Structural Integrity	Similar
A.6 Connection and Bearing Design	16.6 Connection and Bearing Design	Similar
A.7 Items Embedded after Concrete Placement Minor OSHPD amendments	16.7 Items Embedded after Concrete Placement	Similar Evaluate OSHPD amendments for continuation
A.8 Marking and Identification	16.8 Marking and Identification	Similar
A.9 Handling	16.9 Handling	Similar
A.10 Strength Evaluation of Precast Construction	16.10 Strength Evaluation of Precast Construction	Similar
A.11 Reinforcement (OSHPD amendments)	-	Review CBC 1916A.11 for updating, references, clarity
A.12 On-site Cast Precast Wall Panels (OSHPD amendments)	-	Review CBC 1916A.12 for updating, references, clarity
1917A - Composite Concrete Flexural Members	**Chapter 17 (ACI 318-02)** **Composite Concrete Flexural Members**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 17 of ACI 318-02
A.0 Notations	17.0 Notation	Similar
A.1 Scope	17.1 Scope	Similar
A.2 General	17.2 General	Similar
A.3 Shoring	17.3 Shoring	Similar
A.4 Vertical Shear Strength	17.4 Vertical Shear Strength	Similar
A.5 Horizontal Shear Strength	17.5 Horizontal Shear Strength	Similar
A.6 Ties for Horizontal Shear	17.6 Ties for Horizontal Shear	Similar
1918A – Prestressed Concrete	**Chapter 18 (ACI 318-02)** **Prestressed Concrete**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 18 of ACI 318-02
A.0 Notations	18.0 Notation	Similar
A.1 Scope	18.1 Scope	Simlar
A.2 General OSHPD Amends	18.2 General	Similar, review OSHPD amendments – refers to PCI Design Handbook, 5th edition.
A.3 Design Assumptions	18.3 Design Assumptions	Similar
A.4 Permissible Stresses in Concrete Flexural Members	18.4 Serviceability Requirements -- Flexural Members	Similar
A.5 Permissible Stress in Prestressing Tendons	18.5 Permissible Stress in Prestressing Tendons	Similar
A.6 Loss of Prestress	18.6 Loss of Prestress	Similar; review OSHPD amendment 1918A.6.4 for continuation in NFPA 5000

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
OSHPD amendment 1918A.6.4		
A.7 Flexural Strength	18.7 Flexural Strength	Similar
A.8 Limits for Reinforcement of Flexural Members	18.8 Limits for Reinforcement of Flexural Members	Similar
A.9 Minimum Bonded Reinforcement UBC amends ACI 318	18.9 Minimum Bonded Reinforcement	Similar, check UBC amendments and ACI 318-02 provisions
A.10 Statically Indeterminate Structures	18.10 Statically Indeterminate Structures	Similar
A.11 Compression Members. Combined Flexure and Axial Loads	18.11 Compression Members. Combined Flexure and Axial Loads	Similar
A.12 Slab Systems OSHPD amendment 1918A.12.7	18.12 Slab Systems	Review amendment for continuation in NFPA 5000
A.13 Tendon Anchorage Zones	18.13 Post-tensioned Tendon Anchorage Zones 18.14 Design of Anchorage Zones for Monostrand or Singel 5/8" Diameter Bar Tendons 18.15 Design of Anchorage Zones for Multistrand Tendons	Similar
A.14 Corrosion Protection for Unbonded Prestressing Tendons	18.16 Corrosion Protection for Unbonded Tendons	Similar
A.15 Posttensioning Ducts	18.17 Posttensioning Ducts	Similar
A.16 Grout for Bonded Prestressing Tendons	18.18 Grout for Bonded Tendons	Similar
A.17 Protection for Prestressing Tendons	18.19 Protection for Prestressing Steel	Similar
A.18 Application and Measurement of Prestress Force.	18.20 Application and Measurement of Prestress Force	Similar
A.19 Posttensioning Anchorages and Couplers OSHPD amendment – 1918A.19.5	18.21 Posttensioning Anchorages and Couplers 18.22 External Posttensioning	Similar, review amendment for continuation in NFPA 5000
A.20 Lift Slab Shear OSHPD amendment	-	Review amendment for continuation in NFPA 5000
A.21 Prestressed Flat Stab OSHPD amendment	-	Review amendment for continuation in NFPA 5000
1919A - Shells and Folded Plates	**Chapter 19 (ACI 318-02)** **Shells and Folded Plate Members**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 19 of ACI 318-02
A.0 Notations	19.0 Notation	Similar
A.1 Scope and Definitions	19.1 Scope and Definitions	Similar
A.2 Analysis and Design	19.2 Analysis and Design	Similar

Chapter 19A - Concrete

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
A.3 Design Strength of Materials	19.3 Design Strength of Materials	Similar
A.4 Shell Reinforcement	19.4 Shell Reinforcement	Similar
A.5 Construction	19.5 Construction	Similar
1920A – Strength Evaluation of Existing Structures	**Chapter 20 (ACI 318-02)** **Strength Evaluation of Existing Structures**	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 20 of ACI 318-02
A.0 Notations	20.0 Notation	Similar
A.1 Strength Evaluation General	20.1 Strength Evaluation General	Similar
A.2 Determination of Required Dimensions and Material Properties	20.2 Determination of Required Dimensions and Material Properties	Similar
A.3 Load Test Procedure	20.3 Load Test Procedure	Similar
A.4 Loading Criteria	20.4 Loading Criteria	Similar
A.5 Acceptance Criteria	20.5 Acceptance Criteria	Similar
A.6 Provisions for Lower Load Rating	20.6 Provisions for Lower Load Rating	Similar
A.7 Safety	20.7 Safety	Similar
1921A - Reinforced Concrete Structures Resisting Forces Induced by Earthquake Motions Note: model code amends ACI 318 provisions, OSHPD makes some minor amendments	**Chapter 21 (ACI 318-02) - Special Provisions for Seismic Design** **NFPA 5000 Sec. 41.5** (references provisions of ASCE 7-02, Sec. A9.9)	Design provisions contained (by reference per NFPA 5000 Section 41.2) in Chapter 21 of ACI 318-02 Evaluate ACI 318 Ch 21, and ASCE 7-02 for conflicts (ACI 318-02 references ASCE 7-98)
A.0 Notations	21.0 Notation	Similar
A.1 Definitions	21.1 Definitions	Similar
A.2 General Requirements	21.2 General Requirements	Similar
A.3 Flexural Members of Frames.	21.3 Flexural Members of Special Moment Frames	Similar
A.4 Frame Members Subjected to Bending and Axial Load	21.4 Special Moment Frame Members Subjected to Bending and Axial Load	Similar
A.5 Joints of Frames	21.5 Joints of Special Moment Frames	Similar
-	21.6 Special Moment Frames Constructed Using Precast Concrete	Evaluate for adoption
A.6 Shear Walls, Diaphragms and Trusses	21.7 Special Reinforced Concrete Structural Walls & Coupling Beams 21.9 Special Diaphragms and Trusses	Similar
-	21.8 Special Structural Walls Constructed Using Precast Concrete	Evaluate for adoption

Chapter 19A - Concrete

2001 CBC – Chapter 19A	NFPA 5000 – Chapter 41	Comments
A.7 Frame Members Not Part of the Lateral-force-resisting System	21.11 Frame Members not Proportioned to Resist Forces Induced by Earthquake Motions	Similar
See 41.2.3.3	21.10 Foundations	Check 41.2.3.3 provisions for any potential conflicts and implementation issues
-	21.12 Requirements for Intermediate Moment Frames	Evaluate for non-adoption
-	21.13 Intermediate Precast Structural Walls	Evaluate for non-adoption
1922A - Plain Concrete A.1 OSHPD amendment prohibiting plain concrete for use other than fill	**Chapter 22 (ACI 318-02) – Structural Plain Concrete**	Evaluate ACI 318-02 Ch 22 provisions for non-adoption
Division III – Design Standard for Anchorage to Concrete **1923A - Anchorage to Concrete**	**Appendix D (ACI 318-02)**	Referenced standard ACI 318-02 Appendix D provisions apply, no tabulated values as currently provided App. D provisions are both new to ACI 318 and are relatively complex (compared with CBC provisions)
A.1 Service Load Design	-	None provided – presents useability/training issues for staff and consitutents (no ASD table as in CBC)
A.2 Strength Design A.3 Strength of Anchors 1923A.3.1.1 [For OSHPD/SS] A.3.2 Design strength in tension A.3.3 Design strength in shear A.3.4 Combined tension and shear A.3.5 Drilled-in expansion bolts or chemical-type anchors in concrete. (OSHPD amendment)	See Appendix D, ACI 318-02	Similar, Appendix D of ACI 318-02 more comprehensive Evaluate OSHPD amendments for continuation
Division IV – Design and Construction Standard for Shotcrete **1924A – Shotcrete**	**41.7 Shotcrete** 41.7.2 adopts ACI 506.2, *Specification for Materials, Proportioning, and Application of Shotcrete*	Evaluate ACI 506.2 and OSHPD amendments to determine whether or not to continue amendments, and that ACI 506.2 addresses aspects of design, construction and testing as the CBC currently does.
A.1 General - OSHPD amends		
A.2 Proportions and Materials		
A.3 Aggregate		
A.4 Reinforcement		
A.5 Preconstruction Tests		
A.6 Rebound.		
A.7 Joints – OSHPD amends		
A.8 Damage		
A.9 Curing		

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A.10 Strength Test - OSHPD amends		
A.11 Inspections - OSHPD amends.		
A.12 Equipment		
A.13 Forms and Ground Wires for Shotcrete – OSHPD amends		
A.14 Placing - OSHPD amends, refers to ACI 506 standard		
Division V – Design Standard for Reinforced Gypsum Concrete **1925A – Reinforced Gypsum Concrete**	**41.8 Reinforced Gypsum Concrete**	NFPA 5000 provisions primarily based on reference standards: ASTM C 317, *Standard Specification for Gypsum Concrete* ASTM C 956, *Standard Specification for Installation of Cast-in-Place Reinforced Gypsum Concrete* ASTM C 472, *Standard Test Methods…*
A.1 General	ASTM C 317, C 956	Review referenced standard
A.2 Design	ASTM C 317, C 956	Review referenced standard
A.3 Stresses	ASTM C 317, C 956	Review referenced standard
A.4 Diaphragms OSHPD amends	ASTM C 317, C 856 1915.2 Minimum Thickness	Evaluate referenced standards to determine need to continue OSHPD amendments
A.5 Details of Construction OSHPD amends	ASTM C 317, C 956	Evaluate referenced standards to determine need to continue OSHPD amendments
Division VI – Alternate Design Method **1926A – Alternate Design Method** (WSD or ASD)	-	NFPA 5000 does not contain Working Stress Design (WSD) or Allowable Stress Design (ASD) provisions, and ACI 318-02 Commentary Section R1.1 refers user to ACI 318-99 Appendix A. Evaluate need to adopt of Appendix A, ACI 318-99; if not adopted, allowance by OSHPD of ASD provisions will be discretionary
Division VII - Unified Design Provisions **1927A - Unified Design Provisions for Reinforced and Prestressed Concrete Flexural and Compression Members**	**Appendix B (ACI 318-02)** **Alternate Provisions for Reinforced and Prestressed Concrete Flexural and Compression Members**	Similar, provisions contained in referenced standard (ACI 318-02)
Division VIII - Alternative Load-Factor Combination and Strength Reduction Factors **1928A – Alternative Load-Factor Combination and Strength Reduction Factors**	**Appendix C (ACI 318-02)** **Alternate Load and Strength Reduction Factors**	Similar, provisions contained in referenced standard (ACI 318-02)
1929A – Testing and Inspection Entire section is OSHPD amendment	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.1 Cementitious Material Test	-	Evaluate and continue OSHPD amendments, may be

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		placed within Chapter 17
A.2 Tests of Reinforcing Bars	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.3 Tests for Prestressing Steel and Anchorage	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.4 Batch Plant Inspection	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.5 Waiver of Batch Plant Inspection	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.6 Waiver of Material Testing	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.7 Placing Record	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.8 Composite Construction Cores	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.9 Inspection of Prestressed Concrete	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.10 Inspection of Pneumatically Placed Concrete Work (Shotcrete)	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.11 Tests of Shotcrete.	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.12 Inspection of Welded Reinforcing Bars	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
A.13 Gypsum Field Tests	-	Evaluate and continue OSHPD amendments, may be placed within Chapter 17
1930A – Existing Concrete Structures (OSHPD amendment)	-	Evaluate and continue OSHPD amendment, may be located in either Chapter 17 or 19
Table 19A-A-1 Total Air Content for Frost-Resistant Concrete	**Table 4.2.1 (ACI 318-02)** Total Air Content for Frost-Resistant Concrete	Similar, table contained in ACI 318-02
Table 19A-A-2 Requirements for Special Exposure Conditions	**Table 4.2.2 (ACI 318-02)** Requirements for Special Exposure Conditions	Similar, table contained in ACI 318-02
Table 19A-A-3 Requirements for Concrete Exposed to De-icing Chemicals	**Table 4.2.3 (ACI 318-02)** Requirements for Concrete Exposed to De-icing Chemicals	Similar, table contained in ACI 318-02
Table 19A-A-4 Requirements for Concrete Exposed to Sulfate-Containing Solutions	**Table 4.3.1 (ACI 318-02)** Requirements for Concrete Exposed to Sulfate-Containing Solutions	Similar, table contained in ACI 318-02
Table 19A-A-5 Maximum Chloride Ion Content for Corrosion Protection Reinforcement	**Table 4.4.1 (ACI 318-02)** Maximum Chloride Ion Content for Corrosion Protection Reinforcement	Similar, table contained in ACI 318-02
Table 19A-A-6	**Table 5.3.1.2 (ACI 318-02)**	Similar, table contained in ACI 318-02

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Modification Factor for Standard Deviation When Less than 30 Tests are Available	Modification Factor for Standard Deviation When Less than 30 Tests are Available	
Table 19A-A-7 Required Average Compressive Strength When Data are not Available to Establish a Standard Deviation	**Table 5.3.2.2 (ACI 318-02)** Required Average Compressive Strength When Data are not Available to Establish a Standard Deviation	Similar, table contained in ACI 318-02
Table 19A-A-8 (OSHPD amendment) Concrete Mixes by Limiting Proportions	-	Evaluate for continuation (prescriptive method A mix), seems useful for small projects
Table 19A-B Minimum Diameters of Bend	**Table 7.2 (ACI 318-02)** Minimum Diameters of Bend	Similar, table contained in ACI 318-02
Table 19A-C-1 Minimum Thickness of Nonprestressed Beams or One-Way Slabs Unless Deflections are Computed	**Table 9.5 (a) (ACI 318-02)** Minimum Thickness of Nonprestressed Beams or One-Way Slabs Unless Deflections are Computed	Similar, table contained in ACI 318-02
Table 19A-C-2 Maximum Permissible Computed Deflections	**Table 9.5 (b) (ACI 318-02)** Maximum Permissible Computed Deflections	Similar, table contained in ACI 318-02
Table 19A-C-3 Minimum Thickness of Slabs Without Interior Beams	**Table 9.5 (c) (ACI 318-02)** Minimum Thickness of Slabs Without Interior Beams	Similar, table contained in ACI 318-02
Table 19A-D Allowable Service Load on Embedded Bolts (OSHPD amends)	-	Continue OSHPD amendments to CBC Table 19A-D as amendments to Appendix D of ACI 318-02
Table 19A-E Minimum Compressive Strength and Modulus of Elasticity and of Rigidity of Reinforced Gypsum Concrete	-	Review ASTM C 317, C 956 for equivalent provisions
Table 19A-F Allowable Unit Working Stress Reinforced Gypsum Concrete	-	Review ASTM C 317, C 956 for equivalent provisions
Table 19A-G Shear on Anchor Bolts and Dowels - Reinforced Gypsum Concrete	-	Review ASTM C 317, C 956 for equivalent provisions
Figure 19A-1 Minimum Extensions for Reinforcement in Slabs Without Beams	**Figure 13.3.8 (ACI 318-02)** Minimum Extensions for Reinforcement in Slabs Without Beams	Similar, Figure contained in ACI 318-02